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☐ 1: P27430. DNA protection du...[gi:232021]

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LOCUS P27430 167 aa linear BCT 15-SEP-2003  
 DEFINITION DNA protection during starvation protein.  
 ACCESSION P27430  
 VERSION P27430 GI:232021  
 DBSOURCE swissprot: locus DPS\_ECOLI, accession P27430;  
 class: standard.  
 created: Aug 1, 1992.  
 sequence updated: Oct 1, 1993.  
 annotation updated: Sep 15, 2003.  
 xrefs: gi: 41294, gi: 41295, gi: 440180, gi: 440182, gi: 1787025,  
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 gi: 12513807, gi: 12513811, gi: 13360211, gi: 13360349, gi: 41568,  
 gi: 24051016, gi: 24051020, gi: 30040349, gi: 30040541, gi: 538739,  
 gi: 25318450, gi: 25318452, pdb accession 1DPS  
 xrefs (non-sequence databases): PhosSiteP27430, SWISS-2DPAGEP27430,  
 EcoGeneEG11415, InterProIPR002177, InterProIPR001519, PfamPF00210,  
 PRINTSPR01346, ProDomPD149803, PROSITEPS00818, PROSITEPS00819  
 KEYWORDS DNA-binding; Iron; 3D-structure; Complete proteome.  
 SOURCE Escherichia coli  
 ORGANISM Escherichia coli  
 Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;  
 Enterobacteriaceae; Escherichia.  
 REFERENCE 1 (residues 1 to 167)  
 AUTHORS Almiron,M., Link,A.J., Furlong,D. and Kolter,R.  
 TITLE A novel DNA-binding protein with regulatory and protective roles in  
 starved Escherichia coli  
 JOURNAL Genes Dev. 6 (12B), 2646-2654 (1992)  
 MEDLINE 94040726  
 PUBMED 1340475  
 REMARK SEQUENCE FROM N.A.  
 SPECIES=E.coli; STRAIN=K12 / W3110  
 REFERENCE 2 (residues 1 to 167)  
 AUTHORS Lomovskaya,O.L., Kidwell,J.P. and Matin,A.  
 TITLE Characterization of the sigma 38-dependent expression of a core  
 Escherichia coli starvation gene, pexB  
 JOURNAL J. Bacteriol. 176 (13), 3928-3935 (1994)  
 MEDLINE 94292411  
 PUBMED 8021175  
 REMARK SEQUENCE FROM N.A.  
 SPECIES=E.coli; STRAIN=K12 / W3110  
 REFERENCE 3 (residues 1 to 167)  
 AUTHORS Blattner,F.R., Plunkett,G. III, Bloch,C.A., Perna,N.T., Burland,V.,  
 Riley,M., Collado-Vides,J., Glasner,J.D., Rode,C.K., Mayhew,G.F.,  
 Gregor,J., Davis,N.W., Kirkpatrick,H.A., Goeden,M.A., Rose,D.J.,  
 Mau,B. and Shao,Y.  
 TITLE The complete genome sequence of Escherichia coli K-12  
 JOURNAL Science 277 (5331), 1453-1474 (1997)  
 MEDLINE 97426617  
 PUBMED 9278503  
 REMARK SEQUENCE FROM N.A.  
 SPECIES=E.coli; STRAIN=K12 / MG1655

REFERENCE 4 (residues 1 to 167)  
AUTHORS Oshima,T., Aiba,H., Baba,T., Fujita,K., Hayashi,K., Honjo,A., Ikemoto,K., Inada,T., Itoh,T., Kajihara,M., Kanai,K., Kashimoto,K., Kimura,S., Kitagawa,M., Makino,K., Masuda,S., Miki,T., Mizobuchi,K., Mori,H., Motomura,K., Nakamura,Y., Nashimoto,H., Nishio,Y., Saito,N., Sampei,G., Seki,Y., Tagami,H., Takemoto,K., Wada,C., Yamamoto,Y., Yano,M. and Horiuchi,T.  
TITLE A 718-kb DNA sequence of the Escherichia coli K-12 genome corresponding to the 12.7-28.0 min region on the linkage map  
JOURNAL DNA Res. 3 (3), 137-155 (1996)  
MEDLINE 97061202  
PUBMED 8905232  
REMARK SEQUENCE FROM N.A.  
SPECIES=E.coli; STRAIN=K12

REFERENCE 5 (residues 1 to 167)  
AUTHORS Perna,N.T., Plunkett,G. III, Burland,V., Mau,B., Glasner,J.D., Rose,D.J., Mayhew,G.F., Evans,P.S., Gregor,J., Kirkpatrick,H.A., Posfai,G., Hackett,J., Klink,S., Boutin,A., Shao,Y., Miller,L., Grotbeck,E.J., Davis,N.W., Lim,A., Dimalanta,E.T., Potamousis,K., Apodaca,J., Anantharaman,T.S., Lin,J., Yen,G., Schwartz,D.C., Welch,R.A. and Blattner,F.R.  
TITLE Genome sequence of enterohaemorrhagic Escherichia coli O157:H7  
JOURNAL Nature 409 (6819), 529-533 (2001)  
MEDLINE 21074935  
PUBMED 11206551  
REMARK SEQUENCE FROM N.A.  
SPECIES=E.coli; STRAIN=O157:H7 / EDL933 / ATCC 700927

REFERENCE 6 (residues 1 to 167)  
AUTHORS Hayashi,T., Makino,K., Ohnishi,M., Kurokawa,K., Ishii,K., Yokoyama,K., Han,C.-G., Ohtsubo,E., Nakayama,K., Murata,T., Tanaka,M., Tobe,T., Iida,T., Takami,H., Honda,T., Sasakawa,C., Ogasawara,N., Yasunaga,T., Kuhara,S., Shiba,T., Hattori,M. and Shinagawa,H.  
TITLE Complete genome sequence of enterohemorrhagic Escherichia coli O157:H7 and genomic comparison with a laboratory strain K-12  
JOURNAL DNA Res. 8 (1), 11-22 (2001)  
MEDLINE 21156231  
PUBMED 11258796  
REMARK SEQUENCE FROM N.A.  
SPECIES=E.coli; STRAIN=O157:H7 / RIMD 0509952

REFERENCE 7 (residues 1 to 167)  
AUTHORS Nohno,T.  
TITLE Direct Submission  
JOURNAL Submitted (XXX-1989)  
REMARK SEQUENCE OF 79-166 FROM N.A.  
SPECIES=E.coli; STRAIN=K12

REFERENCE 8 (residues 1 to 167)  
AUTHORS Nohno,T., Saito,T. and Hong,J.S.  
TITLE Cloning and complete nucleotide sequence of the Escherichia coli glutamine permease operon (glnHPQ)  
JOURNAL Mol. Gen. Genet. 205 (2), 260-269 (1986)  
MEDLINE 87115160  
PUBMED 3027504  
REMARK SEQUENCE OF 142-166 FROM N.A.  
SPECIES=E.coli; STRAIN=K12

REFERENCE 9 (residues 1 to 167)  
AUTHORS Altuvia,S., Almiron,M., Huisman,G., Kolter,R. and Storz,G.  
TITLE The dps promoter is activated by OxyR during growth and by IHF and sigma S in stationary phase  
JOURNAL Mol. Microbiol. 13 (2), 265-272 (1994)  
MEDLINE 95075312  
PUBMED 7984106  
REMARK SEQUENCE OF 1-16 FROM N.A., AND SEQUENCE OF 1-19.  
SPECIES=E.coli; STRAIN=K12

REFERENCE 10 (residues 1 to 167)

AUTHORS Foster, S.J.  
TITLE Purification and characterization of an 'actomyosin' complex from  
Escherichia coli W3110  
JOURNAL FEMS Microbiol. Lett. 110 (3), 295-298 (1993)  
MEDLINE 93359166  
PUBMED 8354462  
REMARK SEQUENCE OF 1-12.  
SPECIES=E.coli; STRAIN=K12 / W3110  
REFERENCE 11 (residues 1 to 167)  
AUTHORS Link, A.J., Robison, K. and Church, G.M.  
TITLE Comparing the predicted and observed properties of proteins encoded  
in the genome of Escherichia coli K-12  
JOURNAL Electrophoresis 18 (8), 1259-1313 (1997)  
MEDLINE 97443975  
PUBMED 9298646  
REMARK SEQUENCE OF 1-12.  
SPECIES=E.coli; STRAIN=K12 / EMG2  
REFERENCE 12 (residues 1 to 167)  
AUTHORS Noll, M., Petrukhin, K. and Lutsenko, S.  
TITLE Identification of a novel transcription regulator from Proteus  
mirabilis, PMTR, revealed a possible role of YJAI protein in  
balancing zinc in Escherichia coli  
JOURNAL J. Biol. Chem. 273 (33), 21393-21401 (1998)  
MEDLINE 98362023  
PUBMED 9694902  
REMARK SEQUENCE OF 1-10.  
SPECIES=E.coli  
REFERENCE 13 (residues 1 to 167)  
AUTHORS Jin, Q., Yuan, Z., Xu, J., Wang, Y., Shen, Y., Lu, W., Wang, J., Liu, H.,  
Yang, J., Yang, F., Zhang, X., Zhang, J., Yang, G., Wu, H., Qu, D.,  
Dong, J., Sun, L., Xue, Y., Zhao, A., Gao, Y., Zhu, J., Kan, B., Ding, K.,  
Chen, S., Cheng, H., Yao, Z., He, B., Chen, R., Ma, D., Qiang, B., Wen, Y.,  
Hou, Y. and Yu, J.  
TITLE Genome sequence of Shigella flexneri 2a: insights into  
pathogenicity through comparison with genomes of Escherichia coli  
K12 and O157  
JOURNAL Nucleic Acids Res. 30 (20), 4432-4441 (2002)  
MEDLINE 22272406  
PUBMED 12384590  
REMARK SEQUENCE FROM N.A.  
SPECIES=S.flexneri; STRAIN=301 / Serotype 2a  
REFERENCE 14 (residues 1 to 167)  
AUTHORS Wei, J., Goldberg, M.B., Burland, V., Venkatesan, M.M., Deng, W.,  
Fournier, G., Mayhew, G.F., Plunkett, G. III, Rose, D.J., Darling, A.,  
Mau, B., Perna, N.T., Payne, S.M., Runyen-Janecky, L.J., Zhou, S.,  
Schwartz, D.C. and Blattner, F.R.  
TITLE Complete genome sequence and comparative genomics of Shigella  
flexneri serotype 2a strain 2457T  
JOURNAL Infect. Immun. 71 (5), 2775-2786 (2003)  
MEDLINE 22590274  
PUBMED 12704152  
REMARK SEQUENCE FROM N.A.  
SPECIES=S.flexneri; STRAIN=2457T / ATCC 700930 / Serotype 2a  
REFERENCE 15 (residues 1 to 167)  
AUTHORS Zhao, G., Ceci, P., Ilari, A., Giangiacomo, L., Laue, T.M., Chiancone, E.  
and Chasteen, N.D.  
TITLE Iron and hydrogen peroxide detoxification properties of DNA-binding  
protein from starved cells. A ferritin-like DNA-binding protein of  
Escherichia coli  
JOURNAL J. Biol. Chem. 277 (31), 27689-27696 (2002)  
MEDLINE 22140317  
PUBMED 12016214  
REMARK CHARACTERIZATION AS AN IRON STORAGE PROTEIN.  
SPECIES=E.coli  
REFERENCE 16 (residues 1 to 167)

AUTHORS Kolter, R.  
TITLE Life and death in stationary phase  
JOURNAL ASM News 58, 75-79 (1992)  
REMARK IDENTIFICATION OF GENE.  
SPECIES=E.coli  
REFERENCE 17 (residues 1 to 167)  
AUTHORS Matin, A.  
JOURNAL Unpublished  
REMARK IDENTIFICATION OF GENE.  
SPECIES=E.coli  
REFERENCE 18 (residues 1 to 167)  
AUTHORS Ilari, A., Ceci, P., Ferrari, D., Rossi, G.L. and Chiancone, E.  
TITLE Iron incorporation into Escherichia coli Dps gives rise to a  
ferritin-like microcrystalline core  
JOURNAL J. Biol. Chem. 277 (40), 37619-37623 (2002)  
MEDLINE 22241953  
PUBMED 12163499  
REMARK CRYSTALLIZATION AND KINETICS OF IRON RELEASE IN CRYSTALS AND IN  
SOLUTION.  
SPECIES=E.coli  
REFERENCE 19 (residues 1 to 167)  
AUTHORS Grant, R.A., Filman, D.J., Finkel, S.E., Kolter, R. and Hogle, J.M.  
TITLE The crystal structure of Dps, a ferritin homolog that binds and  
protects DNA  
JOURNAL Nat. Struct. Biol. 5 (4), 294-303 (1998)  
MEDLINE 98206296  
PUBMED 9546221  
REMARK X-RAY CRYSTALLOGRAPHY (1.6 ANGSTROMS).  
SPECIES=E.coli  
COMMENT On May 6, 1993 this sequence version replaced gi:118912.  
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This SWISS-PROT entry is copyright. It is produced through a  
collaboration between the Swiss Institute of Bioinformatics and  
the EMBL outstation - the European Bioinformatics Institute.  
The original entry is available from <http://www.expasy.ch/sprot>  
and <http://www.ebi.ac.uk/sprot>  
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damage mediated by hydrogen peroxide. Iron-storage protein.  
[SUBUNIT] ASSOCIATES INTO A COMPLEX OF 12 SUBUNITS FORMING TWO  
STACKED HEXAMERIC RINGS.  
[INDUCTION] DURING PROLONGED STARVATION.  
[SIMILARITY] BELONGS TO THE DPS FAMILY.  
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Region 165
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Jul 17 2003 11:56:53